

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Listing of Claims:

Claim 1 (Previously Presented): A video processing method for preparing an anti-aliased foreground image for display over an image background, said method comprising:

generating original foreground image signals by manipulation of a contiguous group of graphics primitives;

applying anti-aliasing filtering to edges of each primitive of said group of graphics primitives to generate primitive-processed image signals;

preparing said image background for display;

first processing said primitive-processed image signals to alpha blend said primitive-processed image over said image background, where alpha values of the edges of each primitive of said group of graphics primitives are determined by the anti-aliasing filtering;

second processing said original foreground image signals to superpose said original foreground image over said alpha-blended primitive-processed image so that only the anti-aliased edges, which extend outside an area of said original foreground image, of said alpha-blended primitive processed image remain exposed, low-pass filtering a result of said second processing to generate a low-pass filtered foreground image, detecting

peripheral edge regions of said group of graphics primitives, superposing said peripheral edge regions of said low-pass filtered image over said result of said second processing, and generating a display signal based on a result of said superposing; and

outputting said display signal for displaying said anti-aliased foreground image generated based on said original foreground image superposed over said alpha-blended primitive-processed image.

Claim 2 (Cancelled).

Claim 3 (Previously Presented): A method according to claim 1, wherein said low-pass filtering further comprises:

horizontal low-pass filtering; and

vertical low-pass filtering.

Claim 4 (Previously Presented): A method according to claim 3, wherein said horizontal low-pass filtering comprises:

interpolating a pixel-shifted version of said original foreground image, said pixel-shifted image being shifted horizontally by a non-integral number of pixels; and
shifting said pixel-shifted image back by said non-integral number of pixels.

Claim 5 (Previously Presented): A method according to claim 4, wherein said non-integral number of pixels is half a pixel.

Claim 6 (Previously Presented): A method according to claim 3, wherein said vertical low-pass filtering comprises:

first interpolating a vertically-expanded image from said original foreground image; and
second interpolating a non-vertically expanded image from said vertically expanded image.

Claim 7 (Previously Presented): A method according to claim 6, wherein said vertically expanded image is expanded by a vertical factor of 2.

Claim 8 (Previously Presented): A method according to claim 1, wherein each pixel of said original foreground image has an associated transparency coefficient, and wherein said low-pass filtering and said superposing further comprise:

writing said low-pass filtered image over said original foreground image so that said original foreground image is modified by pixels of said low-pass filtered image in dependence on said transparency coefficient associated with each display position of said original foreground image, said transparency coefficient for pixels near a peripheral edge of the group of graphics primitives in said original foreground image being set so that the pixels near the peripheral edge of the group of graphics primitives are replaced by corresponding pixels of said low-pass filtered image.

Claim 9-15 (Cancelled).

Claim 16 (Currently Amended): A video processing apparatus for preparing an anti-aliased foreground image for display over an image background, said apparatus comprising:

a generator ~~to generate~~generating original foreground image signals by manipulation of a contiguous group of graphics primitives; an anti-alias filter ~~to apply~~applying anti-aliasing filtering to edges of each primitive of said group of graphics primitives to generate primitive-processed image signals; first logic means ~~to prepare~~preparing said image background for display;

second logic means to ~~process~~processing said primitive-processed image signals to alpha blend said primitive-processed image over said image background, where alpha values of the edges of each primitive of said group of graphics primitives are determined by the anti-alias filter;

third logic means to ~~process~~processing said original foreground image signals to superpose said original foreground image over said alpha-blended primitive-processed image so that only the anti-aliased edges, which extend outside an area of said original foreground image, of said alpha-blended primitive processed image remain exposed to generate a first superposed image, said third logic means low-pass filtering ~~a result of said superposing the original foreground image over said alpha-blended primitive processed image~~ said first superposed image to generate a low-pass filtered foreground image, detecting peripheral edge regions of said group of graphics primitives, superposing said peripheral edge regions of said low-pass filtered ~~foreground~~ image over said ~~result of said superposing the original foreground image over said alpha-blended primitive processed image~~ first superposed image to generate a second superposed image, and generating a signal for displaying based on ~~a result of said superposing said peripheral edge regions~~ said second superposed image; and

fourth logic means to ~~output~~outputting said signal for displaying said anti-aliased foreground image generated based on ~~original foreground image superposed over said alpha-blended primitive processed image~~ first superposed image.

Claim 17 (Currently Amended): A computer readable storage medium including a ~~processing~~ program stored thereon, the program causing to cause a computer system including a graphics synthesizer and a vector unit to perform a process-method of preparing an anti-aliased foreground image for display over an image background in order

to provide anti-aliasing in a video effects system when the processing-program is executed on the computer system, the process-method comprising:

generating original foreground image signals by manipulation of a contiguous group of graphics primitives by the vector unit;

applying anti-aliasing filtering by the graphics synthesizer to edges of each primitive of said group of primitives to generate primitive-processed image signals;

preparing said image background by the graphics synthesizer for display;

first processing by the graphics synthesizer of said primitive-processed image signals to alpha blend said primitive-processed image over said image background, where alpha values of the edges of each primitive of said group of graphics primitives are determined by the anti-aliasing filtering;

second processing by the graphics synthesizer of said original foreground image signals to superpose said original foreground image over said alpha-blended primitive-processed image so that only the anti-aliased edges, which extend outside an area of said original foreground image, of said alpha-blended primitive processed image remain exposed, low-pass filtering a result of said second processing to generate a low-pass filtered foreground image, detecting peripheral edge regions of said group of graphics primitives, superposing said peripheral edge regions of said low-pass filtered image over said result of said second processing, and generating a signal for displaying based on a result of said superposing; and

outputting from the graphics synthesizer said signal for displaying said anti-aliased foreground image generated based on said original foreground image superposed over said alpha-blended primitive-processed image.